The protection of Electronic Copyright Management Systems

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Published in:
Legal Aspects of Intellectual Property Rights in Electronic Commerce - 2nd ECLIP Workshop Proceedings

Publication date:
1999

Document Version
Publisher's PDF, also known as Version of record

23 Séverine Dusollier[1]: Legal and Technical Aspects of Electronic Rights Management Systems (ERMS)

23.1 Introduction

I had planned to speak on the technical and legal aspects of rights management systems. For the first aspect the technology provider in the COPEARMS project originally planned to be with me in the debate but unfortunately he was unable to come. Therefore, I will not go into the technical aspects of the issues of ECMS very deeply but don't be afraid to ask me and if I cannot answer the questions myself I will address them to our technology provider.

All of you know the famous sentence by Charles Clark that the answer to the machine is the machine. By this sentence, Charles Clark launched the idea that the copyright would finally enter in a new area of management and enforcement, where technology could be envisioned in order to provide an answer to safeguard the intellectual property rights threatened by the same technology. But what I would like to stress with this sentence is that maybe the answer to the machine is in the machine. But this machine can raise new problems that we should also face and consider.

There are a number of technological measures existing in copyright protection and I do not have enough time to go into the technological systems such as identifications systems, watermarking, metering systems, etc. I will focus on the systems that probably constitute the future of rights monitoring, e.g. the electronic copyright management systems (ECMS) or electronic rights management systems (ERMS). The second wording has been preferred because we have seen in a lot of cases that not only copyrights can be monitored and managed by such systems but also related rights, the *sui generis* rights for databases and contractual rights as well.

I will just say a few words about the COPEARMS project[2] which is an ESPRIT project that comes to its end in a couple of weeks. Its objective was to assist projects which develop and implement electronic copyright management systems. During this assistance we have learned a lot about

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[2] For more information see our web site at: http://www.ifla.org/VI/2/p5/.

the real world of copyright management and a number of the legal issues that I will address have been detected during the assistance to such projects. If you need any information about the COPEARMS project you can contact me since some of the partners of the project and I will in the next month launch a consultancy service on the ECMS to implement and monitor them in multimedia projects.

23.2 What Are Electronic Copyrights Management Systems?

There is no real definition of electronic copyright management systems. In the COPEARMS project we have decided to use the definition "software, and possibly a hardware product, associated with one or several copyright applications and aimed at authorising the access to and usage of these applications and managing their IPR." Another broader definition could be "ERMS designates any information technology system or tool that provides appropriate technical mechanisms to protect Intellectual Property Rights (IPR) attached with multimedia documents, or to mediate access to digital resources according to specified rights."

There are three main features which I think are important from a legal point of view. Firstly technology is neutral which means that it cannot as such comply with a number of laws which are highly subjective and I will give you an example later on as regards the copyright exceptions. Another aspect is, of course, that the system has to be universal so it has to comply with a number of laws within the limits of international private law. Finally, it is important to say that the ECMS registers and applies the terms and conditions of contracts entered between the concerned agents. This implies some legal principles for instance with regard to copyright exceptions.

The main functions of electronic rights management systems are numerous:

- it can record the terms and conditions of the contracts between concerned agents
- it monitors the access to and the usage of these applications
- it can prepare usage and attack reports for market feedback, invoices to end-users and acknowledgement of debt to the concerned rightholders. The invoice and acknowledgement of debt can be of course sent electronically to the end-user and the rightholders.
- it manages payments
- it has strong security functions
- it can integrate EDI messages and finally
- it integrates the identification number for works and their rightsowners.

This is a general scheme for the functions of electronic copyright management systems. To illustrate this scheme I will take the example of an educational database in an on-line environment. Teachers and students are browsing on-line and accessing a number of collected materials. It is very easy at present to monitor the simple access to the database as a whole and you can easily say that a certain user, here a student, has access to the database or not.

But there are more complicated questions. You can need to monitor for example the content of the database the student is entitled to get access to. For example he could be allowed to access exams questionnaires and papers written by other students and so on. Another question is that you can ask what the user can do with the content he has access to. Maybe he can print it but maybe he shall not be able to copy it electronically, maybe he can communicate it to other people who are outside the system. The ECMS aims at providing an answer to all of these questions. You can secure the database by ECMS and the ECMS can deny access to non-authorised people as regards some contents, it can prepare invoices, control the exact utilisation of the content or it could manage the IPR content the user provides, for instance in the example case the students could provide scientific papers which might be protected by copyright. By uploading such papers in the database the ECMS can automatically take into account these papers and manage the rights attached to them. On the other hand it can monitor copyright in the works of any content providers and it can pay royalties for adequate use.

23.3 Legal Issues

There are many issues created by the ERMS but I will focus on two hottest topics related to Intellectual Property Rights regulatory framework: the issue of the balance between rights and limitations and the issues of the legal protection of ERMS, i.e. the prohibition of circumvention and of circumvention devices.

23.3.1 Balance of Rights in the Information Society

In a digital world wrapped by technological devices, the user won't be able to exercise the exemptions to copyright in the same way as in the physical world. In this last case, the copyright exemption was primarily used as a defence in litigation for copyright infringement. The user who had made an unauthorised reproduction or communication to the public of a protected work is allowed to argue that such an act was covered by a copyright exemption. Whatever his success will be, the user can enjoy from the exemptions system in a reasonable extent. A proper balance

between the interests of the copyright holder and that of users or that of the society as a whole is maintained.

In the digital world, the function of an exemptions system will be completely different. All the exceptions necessarily imply carrying out a restricted act, whether it is an act of reproduction or an act of communication. But such act may be inhibited or prevented by a technological measure.

If any act of reproduction or communication of a copyrighted work is inhibited by a technological protection, the user will have either to sue the rightholder for enabling him to exercise his exemption (for instance for research, education, criticism purpose) or to deploy some skill for circumventing the technical measure. In both cases, the burden imposed on the user is rather heavy. The exemption will resume its function of defence only in the case of an action brought against the user for having circumvented the system. This is why we can reasonably fear, as some commentators, that the balance embedded in most copyright regimes is threatened. The same is true with regard to access to public domain material.

A lot of legal commentators argue for recognition of the binding nature of the exceptions, which means that a contract or technology would not be allowed to override the exceptions. Prof. Hugenholtz has drawn a useful distinction to consider whether an exception is of binding nature or not. He distinguishes exceptions arising from fundamental rights such as the right of privacy and the right of freedom of expression. Secondly, there would be exceptions with an underlying general interest, such as educational and library privileges or some more specific national exemptions. A third category of exemptions is called "market failure" exceptions which encompass exceptions which result from a lack of possible control of the exploitation of the works. For Hugenholtz, the first category of exceptions should be considered as binding, the second one should be discussed and the third one should not deserve a binding nature.

I think it is important to consider this distinction. I do not have an answer how the existing exceptions have to be categorised in the different types of exceptions; it is a work which should be dealt with by the legislator to see if such exceptions have to be considered as a fundamental right or a mere general interest. If this is the case the legislator has to decide whether such an exception has to be binding. Personally, I think that at least the exceptions inferring from fundamental rights should be regarded as binding and should not be departed from neither by contract nor by technical devices or systems. As regards the exceptions conveying public interest, they should not necessarily be considered as binding. But at least, the rightholder should be obliged to provide entities or institutions carrying out some restricted acts in this framework with a copy of work enabling such exercise or agree upon fair licensing schemes.

If we consider the existing legislation, two directives grant a binding nature to some exceptions: the EC Database and the Software Directive. In the draft directive on the harmonization of copyright this issue was not taken into account but in one recital of the directive proposal it is said that the private copying exception could be disabled or prevented by technological measures. So I think this is a good indication to say that the Commission does not consider private copying exemption as a binding exception.

In the Belgian law, Prof. Strowel mentioned this yesterday, we have had a – in my opinion – strange modification of the law when transposing the Database Directive. The Belgian legislator has provided that all exceptions for copyright and neighbouring rights are considered as imperative and thus cannot be overruled by contract. I think that the Belgian legislator should have launched an overall discussion about this matter beforehand. Indeed this provision has passed the voting process without any deep discussion and the rightholders were not really involved in the process. So this process was a little bit rapid and maybe not all exceptions really deserve the same attention and should be considered as binding.

Actually, the problem of exceptions should be considered on two levels.

Firstly, the technology encapsulates a copy of a protected work. In this case, nothing prevents a user from enjoying exceptions in other copies of the work. Nevertheless, a lawful user which could be defined as a user having lawfully access to the protected work should be entitled to accomplish some acts of reproduction or communication, as permitted in the analogue world. He should be allowed to make a reproduction or communication for criticism, research, education purposes, etc. The notion of a lawful user should be the same than that provided in the database directive.

Secondly, the technological measure encapsulates the only available copy of the work. This could be the case, for instance, if the work has been created in a digital form for the purpose of the copyrighted application protected by the ECMS. Databases of digital information will generally be included in this case. In the case of technological measures, both the access and the possibility to make a reproduction of a work are restricted.

On one hand, a legitimate access to the works should be granted to the public, but this a public policy matter. The legislator could and should consider this priority issue in order to avoid a world of cultural and informational content locked in technical systems. Some ideas have already been stressed such as the setting-up of a register where the works should be deposited in order to ensure a free or low-cost access for the public. This could constitute a sort of universal service in the field of the providing of cultural and informational content. The same concern is particularly true with the public domain which could be locked in a protecting technology.

But even for the users enjoying the access to the copyrighted application as a whole, for example because he has bought the CD-ROM or because they have paid for the access to an on-line service, they could be prevented from exercising an exception in the works components of the application.

This is the real issue of the development of technological measures. As we have seen earlier, it does not suffice to provide a binding nature of the exceptions since the technology by its very nature will not be able to comply, in most cases, with such an imperative nature. We could envisage the example of the imperative exception provided in the database directive as regards the right for the lawful user to extract and re-utilize a non substantial part of the database. The ECMS should comply with that provision and allow the user to extract a non substantial part of the database. But, since the notion of substantial is qualified quantitatively and qualitatively, the technological system is not capable to check whether a part extracted by an user is substantial or not. The only way to do it is to design the ECMS in such a way that some parts of the database protected are qualified by the rightholders as non substantial. This unilateral decision could make the exception void of meaning.

23.3.2 Existing Legal Protection of Electronic Rights Management Systems

A proper protection of technical measures protecting copyright against circumvention is a prerequisite for their economic development, and thus for IPR management in the Information Society. As soon as technology has been envisaged to enhance an effective exercise of copyright, it has been feared that a similar technology might be used to defeat the technical protection. Therefore a due protection of the electronic copyright protection and management systems has always been a great concern of the rightholders and of the industry developing these systems. They know that a machine may be defeated by another machine.

The idea was to prohibit the circumvention devices to ensure the protection by technological measures.

Some protection already exists, though it might be considered as insufficient. The Software Directive of 1991 and the transposition in Member States prohibit *"any act of putting into circulation or the possession for commercial purpose of, any means the sole intended purpose of which is to facilitate the unauthorised removal or circumvention of any technical device which may have been applied to protect a computer program."*

Such protection is thus limited to technological measures protecting software, which makes the protection insufficient. In certain cases, it can be considered that the ECMS in itself is a protected software and that the manufacturing of the circumvention devices could be considered as illicit

reproduction of the software. Indeed, by virtue of the Directive, the rightholder enjoys from a exclusive right to authorise the reproduction, adaptation and any other alteration of a computer program. In the course of the act of circumvention, an adaptation or reproduction might occur. Equally, in the manufacture of circumvention devices, a reproduction or adaptation of the software to be circumvented can take place.

Nevertheless, the protection granted by the Directive on computer programs is limited to the case where the technological measure itself is a software and where the circumvention activities presuppose a reproduction thereof or any other restricted acts. Moreover, other technical protection measures might not be protected by this provision. And last, but not least, the author of the TM-software, thus the person or company having developed it, shall only enjoy the protection. The rightholders using it for protecting their works won't be entitled to prohibit the reproduction of the computer program.

Another protection can be found in liability provisions or provisions of criminal law related to computer which prohibit the circumvention of protecting devices. In some countries, this kind of protection has been evoked in case law too, such as in the United States. Other case law has outlawed circumvention devices on the ground of competition law or unfair commercial practice.

23.3.3 Legal Initiatives for Protecting Technical Measures

At present, there are numerous drafts or legislation which envisage a protection of the technological measures: WIPO treaties, the draft directive on copyright and the draft directive on conditional access even if it excludes explicitly from its scope of application the protection of technological measures protecting copyright matters. There is also a US position which I will not have the time to discuss but which like other US legal texts includes some very complicated provisions[3].

It appears from these different legal provisions that the envisaged protections are often pretty various, even contradictory in some cases. I will try to expose the main differences in terms of the object of protection, the definition of prohibited acts and of illicit devices or services, the requirements for such a prohibition, the type of sanctions and the consideration of copyright exemptions and limitations.

Firstly the object of the protection. The WIPO treaties provide only that effective technological measures shall be protected, without defining them. This provision leaves this definition open for interpretation: it shall be a matter for Contracting States to consider what the term "effective" means.

[3] Some texts referred to in this lecture you will find as an annex to this lecture.The US Bill has been enacted by the Congress since this lecture.

The draft copyright directive says that the technological measure will be effective where the work is controlling and limiting the access of the user. Defining the effectiveness of a technological measure by the notion of access is in my opinion a mistake, since it could leave some technological measures out of the protection. For example, an electronic rights management system can grant you a free access to a service as a whole but at the same time prevents you from making reproduction or further communication to the public – it could be the case for example where a movie which is granted by the rightholders to be shown to the users of a database on the condition that the content will be protected by ECMS preventing any reproduction or further communication. In this case the draft copyright directive will not protect the technological measures because the content is accessible and the measure should thus be regarded as not effective.

Additionally, this notion of access brings a confusion with the proposal for a conditional access directive. Indeed this proposal covers *"the protected services', the provision of which are provided on the basis of conditional access' as well as the provision of conditional access to the above services as a service in its own right"*, whereas "Conditional Access" means *any technical measure and/or arrangement whereby access to the service in an intelligible form is made conditional upon prior individual authorisation aiming at ensuring the remuneration of that service.*

As regards this confusion, maybe a difference to the proposed copyright directive would be that the first directive refers to the access to a service as a whole while the copyright directive refers to the access to a work and other subject matters. But this will not be sufficient to draw a clear distinction between these two directives. Moreover, in the case where the technological measure protects the access to a database the protections are overlapping completely because in the case of a database the service is itself the protected matter. Another difference is that in the conditional access directive it is the service provider who is protected and in the copyright directive it is the rightholder. But in the Information Society the service provider is sometimes the rightholder and sometimes the service provider may monitor the usage of works with a technological measure on behalf of the rightholders.

The term "illicit devices and services" is defined in the text of the US position and the texts of the European Commission as devices *"which have only limited commercially significant purpose or use other than circumvention."* It is very difficult to draw a line between licit and illicit devices and this was a great concern of electronic consumer manufacturers which would be sure that the product they will design and manufacture for a licit purpose would not be outlawed by the directive proposals. For instance, if a video recorder can be used to bypass an anti-copy device, while its main objective is to play and record videotapes, does it mean that the video recorder has to be considered as illicit? I am wondering anyway how the "limited commercially significant purpose or use" will be construed. Will a device primarily designed and sold to accomplish a legitimate purpose but being eventually largely acquired because of a circumvention use, be considered as illicit? What is commercially significant? Is it 51 % of licit use, 75 %, 30 %? Could a device be outlawed in one country while being licit in another?

The illicit acts are for the draft copyright directive *any activities, including the manufacture or distribution of devices or the performance of services that facilitates or enables the circumvention.* With regard to the proposal on conditional access the illicit act is the *installation, maintenance or replacement for commercial purposes of an illicit device, the use of commercial communications to promote illicit devices and the manufacture, import, sale or possession for commercial purposes of illicit devices.* You see that the illicit acts are numerous and the term is not identical in the two draft directives. So for technological measures which could be covered by both directives I think there may be a lack of legal certainty about which activities will be illicit.

In some texts the services are covered. I think this is the case in the draft copyright directive which mentions "any activities". As regards the act of circumvention in itself, namely that carried out by an individual, this is not so certain. The copyright directive says in the memorandum that the important objective is to prohibit the manufacturing of devices which is called the preparatory activity and that the act of circumvention by an individual user is not really important. But we could understand by "any activities" that the act of circumvention by an individual could also be covered.

In the copyright directive the requirement of knowledge indicates that you have to know that the device you manufacture can be used for circumventing technological measures. Since this element does not appear in the conditional access directive proposal, I think that if the technological device you are manufacturing without any knowledge that this device could circumvent technological measures of protection, maybe you will not be covered by the copyright directive but you may be covered by the conditional access directive. I wonder if this element of knowledge should not appear also in the conditional access directive.

I come now to the consideration of copyright exceptions for limiting the scope of application of the prohibition. A number of people consider that if the circumvention is used for exercising an exception or getting access to public material it should not be outlawed. The WIPO treaty says that what is really prohibited are the acts which are not authorised by the author. So according to this treaty it seems that circumventing technological measures should be allowed if it is for the purpose of exercising exceptions. You have the same concern in the copyright draft directive in the memorandum and we have also recitals in this directive which state

that the prohibition would not apply if you circumvent the system for decompilation purposes. There is a strong concern in the US around these exceptions matters but I think that the answer found is very weak. On one hand, the prohibition of the circumvention of technological measures controlling access to works is delayed at the end of a period of two years. During this time, the Librarian of Congress and the Register of Copyright shall conduct a rule-making so as to determine the effects of the prohibition on users of copyrighted works.

On the other hand, the US text states, as a matter of principle, that *"nothing in this section shall affect rights, remedies, limitations, or defences to copyright infringement, including fair use."* This article appears at first sight, exempt from the prohibition the circumvention accomplished in the sole purpose to exercise a fair use. Actually, what is concerned is the defence to copyright and not to the circumvention act. It means that in the case where circumvention took place with a view at getting access to works in the framework of fair use, the infringement of copyright might be argued and removed while the offence of the circumvention still subsists and can be prosecuted. This means that a user may sustain a sanction only for the circumvention act even if he has committed no copyright infringement.

From my point of view, the problem of exceptions has nothing to do with the matter of legal protection of technological devices. On the one hand it seems very strange that a user circumventing technological measures to be able to exercise an exception, will finally be liable of an infringement to a law without having infringed the copyright. Thus, I think that in this case the ground for protecting technological measures is not really copyright, it is the protection of an investment in technology for protecting copyright. So the reasoning for this protection is completely different.

As regards the manufacturing of technological devices enabling the exercise of exceptions; this concept seems a bit strange because the technological devices which shall be manufactured and sold will not be different from devices enabling the infringement of a copyright because it is the same act of reproduction.

Thus, I do not think that the matter of exceptions should be considered here in the legal protection of technological measures: it should be considered at an earlier stage. This question of exceptions highlights the complexity of the legal protection of technological measure and its boundaries. Either the protection does not cover the circumvention carried out for the purpose of the exercise of an exception nor the manufacture and commercialisation of circumventing devices enabling such exercise. In this case, the protection might be fragile since its prohibition can be defeated by a fair use argument and the illicit device would be easily modified so as to be considered as licit.

As a conclusion, I would suggest that a proper protection of technological measures against their circumvention, whatever they enable access to services as a whole, to protected content, or they monitor and manage the utilisation of protected works by registered users, should be found elsewhere than in IPR legislation. It could be done for instance by a computer crime regulation which would prohibit any unauthorised access to no free services regardless these services are copyright-based or not.

What really appears to matter is the investment in the technology, whatever this technology can do. To that end it could be very useful to provide for uniform protection – maybe by computer crime regulation – which could prevent the circumvention of any technology used for protecting access to services. Maybe in this framework, the case of IPR content should be particularly dealt with.

In this framework I do not think that the user should be prevented from the circumvention act only if such circumvention has been done maliciously. In other cases, the copyright infringement which has been enabled by the circumvention should be the only basis for suing the individual.

Of course, in this solution, the problem of copyright limitations and public domain still subsists. But, this issue should not be dealt with at the stage of the protection of technological measures. It is too late then. The compliance of these devices with the exceptions should be ensured at an earlier stage, as early as their design and development. This could be done namely by granting to copyright exemptions a binding nature.

These are my conclusions and I hope they have indicated that the law has a long way to go to address all the issues raised by electronic copyright management.

Thank you very much.

23.4 Annex: Texts of Legal Initiatives for Protecting Technical Measures

23.4.1 WIPO TREATIES

"Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works which are not authorised by the authors concerned or permitted by the law." (article 11 of the WCT).

23.4.2 European Regulatory Framework

23.4.2.1 Proposed Directive on Copyright

Art. 6: *"Member States shall provide adequate legal protection against any activities, including the manufacture or distribution of devices or the performance of services, which have only limited commercially significant purpose or use other than circumvention, and which the person concerned carries out in the knowledge or with reasonable grounds to know, that they will enable or facilitate without authority the circumvention of any effective technological measures designed to protect any copyright or any related rights."*

23.4.2.2 Proposed Directive on Conditional Access

"Member States shall prohibit on their territory, each of the following activities:

- *the manufacture, import sale or possession for commercial purposes of illicit devices;*
- *the installation, maintenance or replacement for commercial purposes of an illicit device;*
- *the use of commercial communications to promote illicit devices,*

whereas the illicit devices are defined as any equipment or software designed or adapted to enable the unauthorised access to a protected service."

23.4.3 US DIGITAL MILLENIUM ACT, (Enacted on the 8th of October 1998) Chapter 12 of the Copyright Act, Sec. 1201

"VIOLATIONS REGARDING CIRCUMVENTION OF TECHNOLOGICAL MEASURES-

(1) No person shall circumvent a technological measure that effectively controls access to a work protected under this title. The prohibition contained in the preceding sentence shall take effect at the end of the 2-year period beginning on the date of the enactment of this chapter. (...)

(2) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that--

(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under this title;

(B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title; or

(C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing a technological measure that effectively controls access to a work protected under this title.

(b) ADDITIONAL VIOLATIONS-

(1) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof that

(A) is primarily designed or produced for the purpose of circumventing protection afforded by a technological protection measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof;

(B) has only limited commercially significant purpose or use other than to circumvent protection afforded by a technological protection measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof; or

(C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing protection afforded by a technological protection measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof."